In the Specification:

Please replace the paragraph beginning on page 14, line 7, with the following rewritten paragraph:

~~Fig. 14 is a schematic diagram~~Figs. 14A, 14B, 14C and 14D are schematic diagrams showing a method for finding a refractive index anisotropy when light is incident, tilting θ from a Z-axis, on a liquid crystal and a retardation plate;

Please replace the paragraph beginning on page 21, line 1, with the following rewritten paragraph:

A main configuration of a liquid crystal display device of the present invention is made by providing, for example, a liquid crystal layer in which vertically aligned liquid crystal molecules tilt in a 0° azimuth where voltage is applied, a $\lambda/4$ plate 1 being a first retardation plate, for example, a $\lambda/2$ plate 2 being a second retardation plate, and a polarizing plate 3, in this order from the side of a liquid crystal panel (only a reflecting electrode, a liquid crystal layer, and a transparent electrode are shown representing a liquid crystal panel for convenience in Fig. 1 and later-described Fig. 2 and Fig. 3). In this configuration, an angle formed between an absorption axis of the polarizing plate 3 and an absorption axis of the $\lambda/2$ plate 2 is about 45°, an in-plane retardation of the $\lambda/2$ plate 2 is set to a value obtained by adding $\lambda/4$ to an in-plane retardation of the retardation plate 1, desirably, the $\lambda/4$ plate 1 (For example, when the in-plane retardation of the retardation plate 1, desirably, the $\lambda/4$ plate 1 is $\lambda/4+\alpha$, the in-plane retardation of the $\lambda/2$ plate 2 is $\lambda/2+\alpha$. The retardation plate 1 is

described as the $\lambda/4$ plate 1 hereinafter, but is not limited to the $\lambda/4$ plate.), and an optical axis of the $\lambda/4$ plate 1 and an optical axis of the $\lambda/2$ plate 2 are orthogonal to each other. In this configuration, the optical axis of the $\lambda/4$ plate 1 is placed at 150°, the optical axis of the $\lambda/2$ plate 2 is placed at 60°, and the absorption axis of the polarizing plate 3 is placed at 15°.

Please replace the paragraph beginning on page 22, line 7, with the following rewritten paragraph:

The $\lambda/2$ plate 2 practically has a function obtained by superposing two retardation plates, that is, $\lambda/4$ plates 2a and 2b having optical axes both at angles of 60°. <u>The retardation of plate 2 is obtained by adding $\lambda/4$ to the retardation of plate 2a.</u> Further, the optical axes of the $\lambda/4$ plate 2a and $\lambda/4$ plate 1 are orthogonal to each other so that their in-plane retardations cancel each other out to be 0, and only the sum of negative retardations of them remains. In other words, the superposition of the $\lambda/4$ plate 1 and the $\lambda/2$ plate 2 provides the same function as that of a configuration provided with a negative retardation plate 4 and a $\lambda/4$ plate 5 as shown in Fig. 2A. <u>In Fig. 2A, the vertically aligned liquid crystal molecule tilts in a 0° azimuth where voltage is applied.</u>

Please replace the paragraph beginning on page 23, line 4, with the following rewritten paragraph:

A specific principle configuration is shown in Fig. 3 as another example of the present invention. Only a reflecting electrode, a liquid crystal layer, and a transparent

electrode are representatively illustrated here for convenience.

Please replace the paragraph beginning on page 24, line 8, with the following rewritten paragraph:

The $\lambda/2$ plate 12 practically has a function obtained by superposing two retardation plates, that is, $\lambda/4$ plates 12a and 12b having optical axes both at angles of 80°. The in-plane retardation of the $\lambda/2$ plate 12 is the sum of an in-plane retardation of the $\lambda/4$ plate 12a and $\lambda/4$, and the in-plane retardation of the $\lambda/4$ plate 12a is the same as the in-plane retardation of the $\lambda/4$ plate 11. In this case, the superposition of the $\lambda/4$ plate 12b and the $\lambda/2$ plate 13 creates a function of the $\lambda/4$ plate of reverse dispersion. Further, the optical axes of the $\lambda/4$ plate 12a and $\lambda/4$ plate 11 are orthogonal to each other so that their in-plane retardations cancel each other out to be 0, and only the sum of negative retardations of them remains. In other words, the superposition of the $\lambda/4$ plate 11 and the $\lambda/2$ plate 12 provides the same function as that of a configuration provided with a negative retardation plate 15 and a $\lambda/4$ plate 16 as shown in Fig. 2B. <u>In Fig. 2B, the vertically aligned liquid crystal molecule tilts in a 0° azimuth where voltage is applied.</u>

Please replace the paragraph beginning on page 67, line 19, with the following rewritten paragraph:

Fig. 12 and Fig. 13 show a method for estimating the retardation of the liquid crystal layer where no voltage is applied and the retardation of the retardation plate, ~~and Fig.~~

~~14 shows~~shown from an observation angle of 0° in Fig. 12, and an observation angle of 45° in Fig. 13. In Figs. 12 and 13, an incident angle θ on the liquid crystal decreases by $0 \rightarrow \xi$ as the entering light approaches from the upper substrate toward the lower substrate (see the arrow to the left of the optical path), and the incident angle θ on the liquid crystal decreases by $0 \rightarrow \xi$ as the reflected light travels from the lower substrate toward the upper substrate to the right of the optical path (see the arrow to the right of the optical path). In Fig. 12, the optical path length of the entering light along path VAC (vacuum air compensation layer) is $dv/\cos\theta 2 = dv/\cos 2\xi$, and the optical path length in the liquid crystal is $dlc/\cos 2\xi$. The reflected light passes through a return route in which the optical path length through the compensation layer, air and vacuum is dv, and the optical path length through the liquid crystal is dlc. In Fig. 13, the optical path length of the entering light along path VAC is $dv/\cos\theta 2$, and the optical path length in the liquid crystal is $= dlc/\cos\theta 2$. The reflected light passes through a return route in which the optical path length through the compensation layer air and vacuum is $dv/\cos(\theta 2 - 2\xi)$, and the optical path length through the liquid crystal is $dlc/\cos(\theta 2 - 2\xi)$. Figs. 14A-14D show a method for finding a refractive index anisotropy when light is incident, tilting θ from a Z axis, on the liquid crystal and retardation plate.

Please insert the following new paragraph on page 68, before line 17:

Figs. 14A and 14B assume that the retardation plate has characteristics of an index ellipsoid having negative refractive index anisotropy in the substrate vertical direction, Fig. 14A showing the incident light in a three-dimensional configuration, and Fig. 14B

showing the incident light in two-dimensions. Figs. 14C and 14D assume that the liquid crystal has characteristics of an index ellipsoid having positive refractive index anisotropy in the substrate vertical direction, Fig. 14C showing the incident light in a three-dimensional space, and Fig. 14D showing the incident light in two dimensions.

The apparent refractive indices nx', nxy, nz' when light is incident, at in incident angle of θ on the xy plane, correspond to the cut surface of an ellipsoid rotated minus θ from the axis. Accordingly, nx = nx, ny', nz'can be found by the following equations:

$$\frac{Y^2}{Ny^2}+\frac{Z^2}{Nz^2}=1$$

$$\frac{Ny'^2\cos^2\theta}{Ny^2}+\frac{Ny'^2\sin^2\theta}{Nz^2}=1$$

$$Ny^{2}{}'=\frac{1}{\dfrac{\cos^2\theta}{Ny^2}+\dfrac{\sin^2\theta}{Nz^2}}$$

$$Ny'=\frac{NyNz}{\sqrt{Nz^2\cos^2\theta+Ny^2\sin^2\theta}}=\frac{Nz}{\sqrt{\dfrac{Nz^2}{Ny^2}\cos^2\theta+(1-\cos^2\theta)}}=\frac{Nz}{\sqrt{1-v\cos^2\theta}}$$

However, $v=\dfrac{Ny^2-Nz^2}{Ny^2}$

When Nz' is similarly found

$$\frac{Y^2}{Ny^2}+\frac{Z^2}{Nz^2}=1$$

$$\frac{Ny'^2 \sin^2\theta}{Ny^2} + \frac{Ny'^2 \cos^2\theta}{Nz^2} = 1$$

$$Ny^{2\,\prime} = \frac{1}{\dfrac{\sin^2\theta}{Ny^2} + \dfrac{\cos^2\theta}{Nz^2}}$$

$$Ny' = \frac{NyNz}{\sqrt{Nz^2 \sin^2\theta + Ny^2 \cos^2\theta}} = \frac{Nz}{\sqrt{\dfrac{Nz^2}{Ny^2}(1-\cos^2\theta) + \cos^2\theta}} = \frac{Nz}{\sqrt{\dfrac{Nz^2}{Ny^2} + v\cos^2\theta}}$$

Please replace the paragraph beginning on page 91, line 10, with the following rewritten paragraph:

Fig. 20 is a characteristic diagram showing azimuth angle characteristics of a λ/4 polarizing plate, for every incident angle (0-30° incidence), of the reflection intensity measured with the incident angle and the azimuth angle varied in the same configuration as in Fig. 18. With an increase in incident angle, the azimuth in which the reflection intensity is minimal increasingly deviates to a minus azimuth.

Please replace the paragraph beginning on page 92, line 20, with the following rewritten paragraph:

Fig. 22 is a characteristic diagram showing λ/4 polarizing plate azimuth angle characteristics (30° incidence) of the reflection intensity measured when the axis placement was rotated +15° from the configuration in Fig. 18, and the azimuth angle of a 30° incidence

was varied.

Please replace the paragraph beginning on page 92, line 25, with the following rewritten paragraph:

Here, when the axis placement is rotated +15° in an azimuth opposite to the deviation, the reflection intensity becomes minimum in the directional azimuth (90°, 270°) by rotating the axis placement +15°.

Please replace the paragraph beginning on page 93, line 1, with the following rewritten paragraph:

Fig. 23 is a characteristic diagram showing λ/4 polarizing plate azimuth angle characteristics (30° incidence) of measured contrast ratio (CR) as in Fig. 22.

Please replace the paragraph beginning on page 93, line 4, with the following rewritten paragraph:

When the axis placement is rotated +15° in an azimuth opposite to the deviation, the azimuth of the transmission axis deviates by +15° from the directional azimuth to slightly decrease the reflection intensity of white display, but the decreased rate is very small, and as a result, the contrast ratio is maximum in the directional azimuth (90°, 270°). Accordingly, a polarizing plate and a retardation plate having a retardation of about a quarter of the visible light wavelength in the substrate in-plane direction are arranged such that the

angle formed between an azimuth φ in which the reflection intensity is maximum and an absorption axis P of the polarizing plate is not less than about 65° nor greater than about 90°, and the angle formed between a slow axis F1 of the retardation plate and P is about 45°, whereby the contrast ratio can be improved in the directional azimuth to realize display that is easy to view. The reason why the angle formed between φ and P is set here to not less than 65° nor greater than 90° is that although an angle of 75° is optimal as the embodiment, an angle within this range allows the reflection intensity to be low as compared to that before the rotation, so that improvement effects can be expected.

Please replace the paragraph beginning on page 98, line 13, with the following rewritten paragraph:

The uniaxially stretched film in use here is a λ/4 plate having an in-plane retardation of 138 nm (manufactured by Sumitomo Chemical Co., Ltd.) and has a retardation of 60 nm to 90 nm in the substrate vertical direction. Light leakage occurs in azimuths different from those of the slow axes of the uniaxial films.

Please replace the paragraph beginning on page 98, line 21, with the following rewritten paragraph:

The λ/4 plates as a compensation plate were arranged in layers such that their slow axes were at 0° and 90°, and the reflection intensity was measured with the azimuth angle of a 30° incidence varied. Besides, the intensities of configurations, as comparative

examples, with and without using as a compensation plate a biaxially stretched film having an in-plane retardation of 2 nm to 3 nm and a retardation in the substrate vertical direction of 150 nm (manufactured by Sumitomo Chemical Co., Ltd.) were similarly measured. In this arrangement, the angle formed between the directional azimuth and the slow axis of the uniaxially stretched film was 0 to 40°, and the reflection intensity was measured with an azimuth angle of a 30° incidence.

Please replace the paragraph beginning on page 99, line 7, with the following rewritten paragraph:

When the uniaxially stretched film is used as a compensation plate, light greatly leaks in azimuths different from that of the slow axis, and the reflection intensity is minimum in the azimuths of the slow axes, that is, the directional azimuths, thus showing compensation effects equivalent to that by a biaxially stretched retardation plate. The leaking light becomes less prominent by decreasing the reflection intensity in azimuths other than the directional azimuths by the reflecting projections and depressions. In this case, uniaxial stretching shows compensation effects equivalent to that of biaxial stretching in the directional azimuths. Reflection intensity in azimuths other than the directional azimuths decreases by reflecting projections and depressions, so that azimuth dependence can be decreased.